

Information Governance Strategy

February 2013

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Executive Summary

The NDA, by virtue of the Nuclear Transfer Schemes by which the assets of BNFL and UKAEA passed into NDA ownership, owns all of the information (with minor exceptions) contained in its Estate. With ownership comes legal and regulatory responsibility for all of this information, regardless of its location, and the key aim of this Strategy is to move the NDA Estate along the road towards compliance, whilst also realising business benefits and efficiencies by making our information assets more accessible and reusable. The NDA intends to achieve this by implementing an Information Governance Compliance Programme across its Estate.

What is Information Governance?

Information Governance (“IG”) is an amalgamation of the following disciplines:

Information Management (“IM”)

IM is the application of techniques to collect information from a variety of sources and to store it in such a way that it is both safe and accessible to those who need it. As a public body, the NDA has legal, regulatory and public duties as the owner of the information generated by the UK’s civil nuclear generation and decommissioning industries since the 1940s. Given the volume of information held in the Estate, a key element of IM is the managed destruction of information when it is no longer required.

Information Risk Management (“IRM”)

The NDA is responsible for the safe-keeping of information that is subject to the UK national security regulatory system. In addition to providing safe and accessible storage, the NDA must satisfy itself, Regulators and key Government stakeholders that its Estate has the capability to keep its sensitive nuclear and personal information assets secure.

Knowledge Management (“KM”)

Effective KM identifies and captures the knowledge held in an organisation, allowing it to be shared and applied. Knowledge can be difficult to define but its key characteristics are that it is previously unrecorded and yet useful, with its critical success factor being that it is re-used. KM is unlikely to be possible in environments where IM and IRM are not managed effectively.

Information and Communication Technology (“ICT”)

Well-planned and managed ICT is a vital enabler for efficient IG. This document does not seek to set the strategy for ICT in the NDA Estate but the NDA must exert influence over the ICT practices of its component parts to ensure that none of the IG disciplines are impacted negatively.

Intellectual Property (“IP”)

The IP generated and owned by the NDA Estate is a valuable asset which should be managed and protected. The NDA needs to strike a balance between IP that it seeks to exploit for commercial benefit and that which it allows to be freely used to stimulate development and innovation.

Why is NDA responsible for IG?

As owner of the information contained in its Estate, the NDA is obliged by the various statutes, regulations and requirements of Regulators and Government (primarily Cabinet

Office – Data Handling Review 2008) to manage its information, knowledge and records to the standard required of a responsible public body. Broadly speaking the NDA must:

- Create, manage, secure, retain and destroy all of its records in accordance with the Public Records Act (PRA), Security Policy Framework (SPF) and national and international Standards as obligated by relevant Acts and HMG policy;
- Maintain a Place of Deposit for its long-term records;
- Ensure that suitable systems are in place so that information can be located in the Estate to enable the NDA to perform its obligations under the Freedom of Information Act (FoIA), Environmental Information Regulations (EIR) and Data Protection Act (DPA). This includes a number of elements that promote openness and transparency through proactive publication; Information Asset Registers, Publication Schemes & effective Records Management policies and systems;
- Ensure that its sensitive nuclear and personal information is kept secure whilst, at the same time, making all information accessible to all stakeholders, including members of the public, where appropriate and prudent to do so;
- Put in place systems to enable information and knowledge capture and sharing;
- Promote collaborative practices wherever practical.

“Effective use of information is absolutely central to the challenges facing the Government today.....Those in public service need to keep that information secure, in order to build public confidence. This is essential to underpin greater data sharing to deliver personalised services and make us more effective.”

(Permanent Secretary of the Cabinet Office in Data Handling Procedures in Government: Final Report, June 2008)

IG in the NDA Estate

The NDA Estate is at the date of this document falling below the minimum IRM standards required by the Cabinet Office. The Estate as a whole has not historically collaborated on the delivery of IG which has led to information being stored and processed in a wide variety of ways, many of them non-compliant and inefficient, some of which are also insecure thereby representing a risk.

There is an unnecessary reliance on the storage of hard copy records often with no accompanying destruction policy, leading to increasing costs. Many legacy ICT systems currently used are nearing obsolescence and are unsupported by their current ICT suppliers, exposing the NDA to the risk of information loss and/or theft. Equally, there are information assets in the Estate which need to be managed for the long and very long-term (>100 – 1,000+ years). This in itself creates challenges and opportunities with respect to digital preservation and the longevity of those information assets.

In such an environment there can be no fully effective Knowledge or IP Management practices, giving rise to areas of business inefficiency. This is currently the case in the NDA Estate.

There are areas of good IM practice and associated facilities across the Estate. However, in many cases, these facilities are scheduled for demolition in the near future which will lead to a further deterioration in IG and an unacceptable increase in the number and potential impact of the risks across the Estate over the next 5 years.

The Solution: Information Governance Compliance Programme (“IGCP”)

NDA must improve IG and associated services across the Estate; reducing risk, baseline costs, increasing the ability to share, collaborate and communicate and thus enabling the Estate to carry out its business more efficiently, safely and effectively. NDA will encourage learning and the preservation and sharing of knowledge, whilst recognising that each organisation also needs to develop and maintain its own practices. We will promote greater collaboration by establishing Estate-wide communities who share business processes, procedures and policies and also by adopting common technologies where it is practical to do so.

The NDA is a relatively young organisation and its key regulatory and Government stakeholders recognise the challenge of working with our Estate towards compliance. The NDA has reassured these stakeholders that it intends to implement an IGCP to deliver a demonstrable and steady rate of improvement in IG practices in a proportionate way such that business benefit and compliance result. The key components of the IGCP will be:

- NDA leadership, governance and, where appropriate, auditability and accountability;
- That it is managed as an NDA ‘National Programme’ cognisant of the impact it will have on each organisation in the Estate;
- Regular review and re-assessment/confirmation of priorities in relation to key stakeholder requirements and the associated NDA’s risk appetite;
- Regular review in terms of the efficacy of the programme;
- A dual approach recognising the benefits of dealing with the legacy issues associated with over 70 years of non-compliance separately to dealing with future requirements;
- Estate-wide IG policies and procedures where it is practical to implement them;
- Wherever possible and appropriate, delivery through others;
- Centralised long term records management solutions;
- Centralised solutions to common Estate-wide challenges such as digital preservation, business continuity, and effective IP management;
- Standardised Estate-wide approach to information assurance and reporting;
- Development of effective and, where practical, common ICT solutions (particularly for RM and KM);
- Delivery, co-ordination and funding of common and effective KM practices;
- The creation of a ‘Knowledge Hub’ where relevant information assets can be shared, accessed and re-used by various stakeholder communities and where suitable KM techniques and systems can be employed to maximise the value of these assets;
- The creation of a system of Estate-wide shared networks through which collaboration and more effective and secure communication will be possible;
- An efficient reporting programme that not only meets the legislative obligations but also interprets key messages and learning into an effective improvement plan;
- Cognisance of Government directives and instructions regarding collaborative solutions such as the Public Services Network (PSNet) and provision of ‘Cloud’ ICT services and applications;
- A suitable Estate-wide IG training programme that provides suitable assurance to all relevant stakeholders;
- A programme that, above all, ensures that the route to compliance is clear, achievable, affordable and represents value-for-money to the Taxpayer and improved business efficiencies.

1 Strategic Case

1.1 Background

IM: As can be seen in the organogram at Appendix 1 and the compliance list at Appendix 2, there is a wealth of statutory and regulatory legislation and guidance that applies to the NDA and its information assets wherever they exist. There are also a number of Government departments/bodies and Regulators governing much of this legislation and together this often presents a number of issues and conflicts in terms of prioritisation and stakeholder management. Particularly so when you consider that the issues invariably have different meaning, with different priorities, dependent on whether or not you are the Authority (NDA), a Site Licence Company (SLC) or a NDA wholly owned subsidiary.

IRM: Cabinet Office's Data Handling Review (DHR), published in 2008, makes a number of recommendations that were developed into a list of Minimum Mandatory Measures (MMM) and subsequently mapped onto the Security Policy Framework (SPF) that all Government departments and public authorities must adopt. This includes the appointment of a number of mandated roles, the introduction of a reporting regime and the expectation that all organisations assess themselves against an Information Assurance Maturity Model (IAMM) with the assistance of the Information Assurance Assessment Framework (IAAF).

KM: Effective KM considers the holistic management and integration of all types of knowledge; tacit, implicit and explicit, and ensures that all are improved, captured, shared and structured in a way which allows them to be used to add real business value. Typically, the corporate memory of an organisation lies both in the knowledge stored in its physical and virtual libraries and in the heads of its people. The NDA Estate is no different in this regard. However, it also has an ageing population whose experience and skills are under threat from a number of sources including, but not limited to, retirement, redundancy and competing employment opportunities for the workforce, including nuclear 'new build'. All of which, without suitable intervention, could result in the loss of this (sometimes critical) knowledge, in turn resulting in the need to re-do much of this work at potentially considerable expense, detriment to health and safety and/or delaying the programme itself.

ICT: The current NDA Estate comprises former BNFL operating companies, elements of UKAEA, a number of subsidiaries and some independent organisations. In addition some organisations outside the NDA still depend on primarily existing ex-BNFL ICT infrastructure for their normal operations. In creating the current environment of SLCs and subsidiaries the NDA introduced minimum changes into the infrastructure to comply with statutory and regulatory requirements and retained much of the legacy.

IP: The UK's nuclear industry has historically managed its IP to secure its freedom-to-operate, ie, avoid the infringement of third party IP and to prevent competitors from copying its technologies, products and services.

Why is this NDA's problem?

The NDA, by virtue of the Nuclear Transfer Schemes, by which the assets of BNFL and UKAEA passed into NDA ownership, owns all of the information (with minor exceptions) contained in its Estate. With ownership comes legal and regulatory responsibility for all of this information, regardless of its location. As owner of the information the NDA is obliged by the various statutes, regulations and requirements of Regulators and Government (primarily Cabinet Office) to manage its information and records to the standard required of a responsible public body.

1.2 Current Situation

At present neither the NDA nor the rest of the Estate have implemented many of the mandated recommendations arising from the DHR. NDA have appointed the mandated roles and effected an implementation plan. However, only rudimentary reporting has commenced to DECC and not efficiently on behalf of the whole Estate. DECC has expressed its concern at this situation and its expectation that this will be rectified immediately. Further, there is a requirement for NDA to commit to achieving a higher standard of compliance by March 2014. Neither of which will be possible without the publication and Estate-wide acceptance of this strategy and the subsequent successful implementation of an effective IGCP.

Each organisation within the Estate is currently responsible for its own local KM and associated implementation plan(s). Most recently, primarily due to the current financial constraints on all areas of the business, this has resulted in a number of organisations removing some or all of this activity from their current programmes even in light of significant changes in the Estate such as the closure of SMP with the resulting termination of the MOX programme and the separation of Capenhurst, both of which result in the increase to the risk of losing critical knowledge from the Estate. Those organisations which are continuing KM activities are doing so largely in isolation and therefore, by definition, minimising the benefits which could accrue to the rest of the Estate and other stakeholders.

Prior to the creation of the NDA there was no requirement on BNFL to manage information as public records and as a result there are over seventy years of records which need reviewing, cataloguing and managing according to statutory obligations. In addition, current processes across the whole of the Estate do not align with the mandated requirements which now apply and many organisations hold records independently from each other resulting in duplication and a wide diversity of technological and manual solutions with varying degrees of efficiency in terms of, effective management, accessibility and security. Estimates as to the volume of information that exists vary enormously. However, through a number of surveys and exercises it has been demonstrated that paper records alone amount to in excess of 80 linear kilometers, some of which exist in buildings on nuclear licensed sites that are due to be demolished in the near future. This does not include any proven assessment of the number of electronic records and documents, currently thought to be in the hundreds of millions.

Each organisation is responsible for its own ICT infrastructure and support, with a number of shared services still being provided by Sellafield Ltd. Multiple data centres exist and the situation becomes more complex as each SLC seeks to define their relationships with the new parent body organisations (PBOs). Additionally, much of the existing infrastructure is now ageing and there are examples that represent a significant threat in terms of information/cyber-security and digital obsolescence.

Most of BNFL's and UKAEA's commercially valuable registered IP (patents, trademarks, etc) have now been transferred to organisations outside of the Estate (eg Energy Solutions, NNL, WEC, etc); while the remaining registered IP and the majority of the non-registered BNFL and UKAEA IP (eg Copyright) now rests with the NDA. The situation is complicated somewhat by the fact that in divesting elements of the BNFL Estate prior to the NDA, exploitation rights for this historical IP are sometimes not vested in the NDA.

1.3 Case for Change

The current IG performance across the Estate is unsustainable, insecure, uneconomic and a bar to efficient business, management and innovation. DECC and the key regulators all

expect us to do better and have articulated this in a number of ways. Should we not be seen to make significant progress in the near future and be moving to a general trend of improvement, NDA risks having a number of sanctions, fines and other forms of intervention imposed upon us and the organisations within the Estate, all of which would risk incurring reputational damage for those organisations, the NDA and DECC.

Given the continuing high level of data breaches from within the Estate and the high profile, high impact examples from other government departments, coupled with the increased threat from cyber-crime, cyber-terrorism and the sensitive nature of the information that the Estate holds we clearly need to ensure that the risk surrounding this information is managed appropriately without inhibiting each organisation's ability to operate, share and innovate.

There is a Cabinet Office mandated requirement for a comprehensive reporting programme to be introduced involving a formal and ad-hoc information flow from the SLCs and subsidiaries to the NDA Senior Information Risk Owner (SIRO) to, amongst others, the NDA's Accounting Officer (AO), Executive, Board, Audit Committee and DECC. The Policy and procedure for this already exist, however, without an approved strategy and IGCP behind them their impact and efficacy are somewhat reduced.

The Energy Act 2004 gives a clear remit for the NDA to ensure continuity of capability and to facilitate the sharing of best practice. By embedding effective KM practices it should be possible to improve health and safety performance, environmental performance, simplify & rationalise business practices, improve staff mobility, reduce risk and baseline costs by sharing best practice, collaborating on solutions and sharing lessons learnt. All of this, however, requires a cohesive programme to be in place and a commitment to it from each organisation within the Estate.

"Knowledge management is not just about distilling knowledge from information and then leaving it somewhere to be discovered. Organisations which have created knowledge-sharing cultures have focused on creating environments in which people have strong networks, can find 'the person who knows' easily, thereby making the subsequent sharing of knowledge and advice both easy and valued. This can be embodied in many ways, including the design of buildings, the design of intranets and the way senior staff lead the organisation." (Information Matters: Building government's capability in managing knowledge and information, HM Government, November 2008).

The NDA's audit of Knowledge Management at Sellafield concluded that:

"A number of instances have been identified where the lack of a coherent knowledge management programme contributes to the following issues that relate to the principal risks addressed by this audit. These are as follows: • Plant outages due to late management response to plant monitoring data; • Repeat events due to lack of learning from previous operating experience; • Repetition of work due to poor access to previous plant history and records; • Events due to lack of access to information relating to recent engineering specification changes; • Procurement and manufacturing quality issues due to engineering specifications that are either not up-to-date or are incomplete; and • Cost of searching for documents due to deficiencies in record and archive management. These deficiencies are contributing to increased costs of decommissioning and extended timeframes in many areas of the business. Of particular concern is the lack of a nuclear safety knowledge management plan in line with IAEA guidelines"

The need to actively manage many NDA records will outlive the organisation that created them resulting in a requirement for a centralised long-term records management solution and a compliant, secure and accurate system to ensure appropriate transfer of information to the next organisation responsible (e.g. waste records to an operator of a geological disposal facility).

The industry has a relatively unique need to manage records over the very long term (thousands of years or potentially indefinitely) which needs to be addressed by working with the supply chain and regulators to develop new technologies and processes (digital curation - preservation and obsolescence) to deal with these needs. Accordingly, NDA will seek to develop a cross-Estate ICT solution for the management of information (records) and knowledge; ultimately delivering not only compliance but also effective practices that will demonstrate improved business efficiency and cost reductions across the Estate.

“On average, up to 10% of staff time is spent looking for records and information”
(Parker, Elizabeth “Managing Your Organization’s Records”)

BAE Systems conducted a study that discovered that 80% of employees waste an average of half an hour per day retrieving information, while 60% are spending an hour or more duplicating the work of others

(Document Management Return On Investment, 2010: BAE Systems white paper)

Whilst NDA remains on the whole non-compliant with many of our IG obligations we remain at risk of punitive fines should the regulators see fit to impose such measures. Additionally, should certain regulators deem the information risk to be too high (with respect to cyber-terrorism for example) they have the ability to cease operations on any site for any of the organisations within the Estate. Typically, however, the greatest threat remains the risk of reputational damage through either not doing enough to reduce the inherent information risk (primarily that associated with inappropriately published personal and/or sensitive information) and/or not having a suitable compliance programme that addresses these and other well publicised information risks.

Creating independent SLCs has resulted in the reduction of our capacity to collaborate and communicate effectively and securely. Rationalising data centres and simplification of infrastructure should result in baseline cost reductions as well as minimising the impacts of that independence. Collaborative procurement and enterprise license management will also result in savings.

There is currently a high risk that an infringement of third party IP will, or has already, occurred. Equally, there is also a risk that NDA is not taking advantage of potentially patentable and/or licensable IP. Either of these circumstances could result in prosecution, fines, reputational damage or missed opportunities.

Sellafield Ltd currently manages in excess of 80,000 boxes of archived NDA records in stores that are not meeting all of the compliance requirements and standards, not to mention what it stores on site and its various offices across the country – currently estimated at in excess of 20 linear kilometers. Magnox Ltd has a similar sized collection in similar stores. The ex-UKAEA SLCs fair slightly better in that they are partially compliant. However, there is still in excess of 14 linear kilometers of these records, the majority of which need to be retained for 50 years plus.

In summary, the history of the civil nuclear industry has taught us that without effective controls in place (delivered through the compliance programme) staff and contractors are likely to continue to keep everything they produce in terms of information assets and data. Very often this is unnecessary and will lead to additional costs and unacceptable risks. Invariably these information assets will then not be effectively shared and communicated to all interested parties resulting in duplication and the effort required to (re)produce them, not to mention the additional costs and risks associated with this effort. Reporting on these assets will be more complex than it needs to be and satisfying our obligations under the request for information Acts will be nigh on impossible.

1.4 Required Outcome

It is anticipated that a comprehensive and well communicated IGCP will deliver the compliance and business benefits required by the many stakeholders involved with IG across the Estate. These include, but are not limited to:

- Delivery of a key aspect of NDA's mission, to collect in a secure and useable form, the knowledge, information and records of the civil nuclear industry for the very long-term where necessary;
- Meeting all of Cabinet Office and DECC's IG related targets, scheduled and ad-hoc reporting requirements and to be consistently improving the IAMM score for all organisations within the Estate, and therefore as a whole, year on year until a suitable steady state of compliance has been achieved. This will be decided by the NDA Board and Senior Information Risk Owner (SIRO);
- Embedding effective IRM throughout the whole of the Estate and, where relevant and advantageous, into the supply chain and to be systematically monitoring networks and auditing performance against standardised assessment models, thus reducing the inherent risk to information assets;
- Preserving the knowledge required in order to fulfill the NDA's core mission, that this knowledge is available to be reused across the Estate in a timely and cost effective manner and that learning is continuously captured and made accessible, both now and for future stakeholders. It must also ensure that key understanding of the sites themselves, the equipment used and the general environment is available throughout the decommissioning operations and that this knowledge is also preserved and used;
- Compliance with all relevant statutory, regulatory and Government-led obligations and requirements across the whole of the Estate;
- The establishment of a fit for purpose, Estate-wide Information (records) and Knowledge Management 'system' and the secure network(s) required to communicate effectively with each other and key stakeholders;
- Delivering business efficiencies and cost savings as a result of more efficient processes, the requirement for less storage, improved security and enhanced assurance practices;
- The NDA recognising its role as a governing authority who has ultimate accountability for these information assets;
- NDA having direct influence with respect to each SLC and subsidiary's ICT strategy and operations thus ensuring compliance with this strategy and the supporting disciplines;
- All data and information is available, secure and safeguarded against all credible threats;
- The establishment of a suitable system and process to manage that IP where there is deemed a requirement or business benefit in doing so and to enable and support the SLCs and subsidiaries accordingly;
- A system to avoid infringement of third party IP and to raise the visibility of potentially patentable/licensable IP. Assurance that any change of PBO does not leave us without the rights to continue to use IP that had already been introduced. In short, know what we've got and protect it accordingly and appropriately in accordance with its perceived value;
- A suitably aware, trained and empowered workforce.

1.5 Constraints

It is envisaged that a suitable IGCP will be a long-term programme requiring expert analysis and dedicated resources. It is anticipated that many of the statutory and regulatory

requirements will change over time as will the guidance, best practice and technology solutions. It is therefore crucial that the IGCP is regularly audited and reviewed for efficacy.

At the time of writing a number of the original constraints for consideration are envisaged to include:

IG Culture: The principle constraint with respect to implementing this strategy and the associated IGCP is that current awareness regarding the obligations remains poor throughout the Estate including at the more senior level where policy and strategies are devised and funded. There are very few Information, IP and Knowledge Managers for example and, where they do exist they tend to be inexperienced or delegated these responsibilities as a (sometimes) minor part of other roles. There will therefore be a significant challenge in terms of education and training. This will be factored in to the IGCP.

Due to the history and nature of the nuclear industry more often than not this has resulted in a 'keep everything forever' culture. This has to be challenged and appropriate Regulatory approved Records Management, including a suitable destruction policy, must be enforced across the Estate. The proposed single Records Retention Schedule as a key deliverable of the IGCP will ensure this.

Due to the history of the nuclear industry within the UK the formation and subsequent break up of a number of large organisations such as BNFL, UKAEA & BNG has inevitably resulted in large amounts of information being uncontrolled, at best, or mislaid at worst. As part of the IGCP Information surveys, gap analysis exercises and the appointment of Information Asset Owners (IAOs) throughout the Estate will attempt to tackle the associated issues resulting from this.

Expectations: DECC and Cabinet Office's expectations are clear with respect to IG, particularly IRM and information security in general, and have been articulated at the highest levels within the NDA and across the Estate.

Appendix 1 demonstrates the broad nature of key stakeholders with regard to regulatory and statutory requirements. Appendix 2 lists that legislation which applies across the Estate at the time of writing.

The regulatory view is that the IG strategy (particularly IM & KM) are key given the long timescales and complex issues associated with decommissioning and clean-up.

"Current operators, liability owners and regulators do need to understand clearly the information needs of current and future generations, and to ensure that this information (and knowledge) is retained and managed such that it remains useful and accessible. Failing to do this will lead to inefficiencies and the need to duplicate efforts going forward, leading to additional cost and loss of public confidence, as well as the potential for the generation of additional unnecessary wastes." (Environment Agency responding to publication of NDA Strategy 2011)

The IGCP needs to be cognisant of the volume and age of many of the business critical information systems and assets and therefore reflect an element of realism in its milestones and targets. 100% compliance with certain aspects of the programme may never be achieved and/or might not offer value for money in terms of the effort and resources required to achieve them. This, again, will be a constantly evolving issue that NDA must communicate to the key stakeholders, primarily the NDA Executive, Regulators and DECC, in order to manage expectations accordingly and effectively.

Time: Many of the deliverables of the IGCP will be time constrained or time dependent with respect to external influences. The IRM reporting improvements required by DECC and Cabinet Office need to start being delivered in the current assessment year, 2012/13. Equally there are a number of recent events within the industry that necessitate the need for an efficient KM strategy and policy, such as the examples mentioned earlier.

Funding: In the current funding constrained environment NDA must ensure that programme activities across the Estate are focused to achieve maximum impact, particularly in the short-term, to demonstrate the value and business benefit of an effective IGCP.

NDA lack of direct control: Whilst many IG obligations are placed directly on the NDA, as we are not custodians of the vast majority of the data and information under our accountability, it is sometimes difficult to effect sufficient levels of control over the solution(s). Particularly so when the most viable and successful solution(s) may rely on taking a collaborative approach and centralising resources in order to maximize the business benefits and/or efficiencies. The NDA's governance role is therefore key and through a number of fora, stakeholder groups and delivery mechanisms (M&O contract, incentivisation, centralised management when delivering key elements) the IGCP will ensure that NDA retains sufficient control in order to manage information risks appropriately, assuring key stakeholders accordingly and realising the required business benefits and efficiencies.

1.6 Issues

The IGCP will have a set of defined risks and opportunities associated with it. This will need to be developed by key stakeholders including the regulators and government and will address many of the concerns outlined above together with the challenges associated with the need for prioritisation as a result of potential financial and other resource related constraints. The following therefore represents only an indicative selection of issues/risks that need to be addressed at the time of writing:

- Many of the obligations and activities in an effective IGCP cannot be delivered by 'others'. NDA must therefore assume a governance role and develop and, in some cases deliver, a number of the solutions itself;
- Whilst IRM obligations relating to NDA alone are already being met on a regular basis, the remainder of the Estate do not currently have the skills or training to meet this obligation;
- Sensitive nuclear and/or personal information is not always currently being protected and processed effectively or securely throughout the Estate;
- IG related training throughout the Estate is currently inadequate;
- Effective IG cannot be achieved by any organisation in isolation;
- Effective KM is the primary route to realising the business benefits of an effective IG strategy and associated programme;
- KM is a varied field which only recently has moved into looking at improving business practices and efficiencies rather than technology and typically lacks a commonly agreed integrative approach;
- Commitment to IG varies greatly between organisations;
- Disjointed activities will generate poor return on investment and could discredit more effective programmes;
- Re-use of information is a requirement of the Energy Act;
- Other legislation requires the effective re-use of all publicly owned information;
- NDA and its Estate are not compliant with many statutory and regulatory requirements including Acts of Parliament and current Government policy (eg. Public Records Act, Lord Chancellor's Code of Practice on the Management of Records issued under

Section 46 of the Freedom of Information Act 2000, etc). NDA, HM Government, DECC and/or regulators will not continue to accept this position without a suitable plan in place;

- It is more effective from both a financial and business perspective to resolve this as an Estate once rather than as individual organisations numerous times;
- Key regulators now have powers to impose punitive fines for non compliance;
- There are potentially unlimited, unrecognised costs of non-compliance. Poor and inaccessible records can have a significant impact on NDA business and result in the need for work to be re-done or delayed;
- Non-compliance with many of the requirements is likely to continue for some time and we must work closely with Government and regulators to ensure their approval of the compliance programme;
- Applying Estate-wide initiatives could reduce the PBO's ability to effect change and introduce innovation;
- We need to rationalise the supply chain with respect to the delivery of IG related services and products;
- Shared systems and infrastructure are more effective and offer better value for money;
- We have a clear need for secure and effective communications across the NDA Estate and with Government. At the time of writing the ability to do this is very limited;
- Roles and responsibilities for IP management across the Estate are not clearly defined or optimised, with the SLCs currently having insufficient operating freedoms and poorly defined obligations;
- The NDA cannot demonstrate that it is realising full value from its IP assets, while it is incurring costs associated with a low value inherited patent portfolio;
- It is not possible to delegate all aspects of IP management to the SLCs. Some activities will need to be managed by the NDA;
- The older M&O contracts are not in alignment with the NDA's current vision for IG.

2 Economic Case: Credible Options

2.1 Potential Options and Summary of Work

Each discipline within IG has undergone a separate optioneering process to determine which solutions are worthy of consideration and which should be discounted. The results of these assessments (Appendix 3), once considered, have been developed into three credible options for the strategy as a whole.

As each distinct discipline has somewhat different requirements for consideration much of the assessment work needed to be conducted in collaboration with different groups of stakeholders including representatives from DECC, The Information Commissioner's Office, the Office for Nuclear Regulation, Environment Agency, and many others, most importantly including the SLCs and subsidiaries themselves.

2.1.1 Identification and application of screening criteria

Each discipline was assessed against the following criteria:

- Regulatory requirements;
- Statutory requirements;
- HM Government guidance and best practice;
- Affordability;
- Stakeholder acceptability;
- Resources and skills available.

2.1.2 Relevant Acts, Statutes, Regulations, Instructions and Guides

Whilst the complete list of reference material relating to this strategy would run to many pages, Appendix 2 represents the summarized list indicating those with the highest importance and/or influence in consideration of the development of the proposed solution.

2.1.3 Credible Options

Taking the benefits of the individual assessments done at the discipline level and summarising them, three potential credible options were devised for the strategy as a whole:

Option 1	NDA to own the IG strategy, IGCP and reporting obligations. The Estate aligns their IG strategies and policies accordingly, working and procuring collaboratively sharing lessons learnt and good practice.
Option 2	Each organisation to define its own strategy and solutions in isolation, free to design their own procedures and processes having only considered their own requirements in accordance with the M&O contract and their own statutory and regulatory obligations.
Option 3	Each organisation is instructed by NDA and aligns with all of NDA's obligations and requirements.

3 Economic Case: Preferred Option

3.1 Credible Options; Assumptions, Constraints and Risks

As many of the compliance requirements are relative to NDA alone (Public Records Act, Minimum Mandatory Measures, etc) there is an assumption that NDA must assume a governance role in ensuring that suitable work programmes and systems are in place to meet them. Further, the skills and experience needed to understand and deliver many of these work packages are often hard to find or non-existent within the Estate. A significant area in consideration of constraints and risks therefore is the training and briefing plan that must be delivered in the early stages of the programme to ensure that a suitably qualified and experienced staff is in place to enable the SLCs and subsidiary organisations to manage their own work streams in accordance with this strategy and the IGCP.

We should also be mindful that the SLCs particularly have a number of obligations placed directly on them by regulators that can sometimes be in direct conflict with guidance from NDA and/or other regulators and HMG. This has to be managed effectively through a stakeholder and regulator engagement plan which is, again, key to the success of the overall compliance programme.

HM Government's IRM expectations with respect to future IAMM Assessments must be managed effectively as, when taken as a whole, the NDA Estate's performance is unlikely to meet all of the requirements for improvement for some time. This also serves to highlight the importance of the IGCP in that, without this as an approved route to compliance, HM Government and regulators are unlikely to accept this situation for much longer.

Two of the key deliverables of the IGCP are projects that, on their own merits, have already received endorsement from both the NDA Board and Executive and represent the collaborative approach required to address the issues described previously. The National Nuclear Archive (NNA) and the National Nuclear Network (NNN) are both essential elements of the overall programme in terms of establishing the foundations relating to information, knowledge and records management practices throughout the Estate and the ICT 'systems' on which much of this work needs to occur. More details concerning these projects are given later in this document.

3.2 Preferred Option

In considering the credible options and when these are compared to the mandated requirements placed on the NDA by the various Acts, regulations and instructions as the governing authority for the civil nuclear Estate, there is only one realistic and workable solution;

NDA to own the IG strategy, IGCP and reporting obligations. The Estate aligns their strategies and policies accordingly, working and procuring collaboratively sharing lessons learnt and good practice.

3.3 Component Parts of the IGCP

At the early stages of development the IGCP has a number of individual projects and foci many of which, as you would expect, having interdependencies and common goals, collaborative opportunities, milestones and objectives with this and other strategies and

programmes. Once this strategy is approved and published work will commence to develop and communicate the programme as an NDA 'National Programme' further ensuring that the route to compliance is clear for all participating organisations and that this route is properly researched, costed, resourced and planned by all. This work is expected to then result in some of the deadlines/objectives needing to be revised, particularly given the requirement to prioritise certain milestones or disciplines relating to certain issues. The recent security enhancement project at a number of the SLCs represents a pertinent example of this and demonstrates effectively the need for flexibility in this programme. Such is the nature of a large multi-disciplined programme that is expected to be delivered over a lengthy period of time within a number of disparate organisations.

At the time of writing some of the key elements of the IGCP are identified below and (in most cases) animated in Appendix 4 to demonstrate some of the key inputs, outputs and deliverables of this strategy.

Information Surveys (Gap Analyses): Each organisation within the Estate will need to perform an assessment of the status of IG within that company and identify how they get from where they are today to be working in compliance with this strategy. It is expected that this work should be largely completed by the end of 2013/14.

Effective IRM Reporting regime: The current Government and regulatory reporting requirements need to be addressed across the Estate as many of the reports are overly complex and demand the duplication of effort at different periods throughout the reporting year. A coordinated approach to all information risk reporting needs to be taken and NDA's role is clear as the governing authority in this regard. A single cross-Estate policy is envisaged with a single reporting regime that ensures that all stakeholders' requirements are accounted for. It is expected to complete this work in 2013.

Compliance with the MMMs: This has been identified by DECC as critical in the reporting year 2012/13 where they expect the NDA to meet the MMMs. The annual IAMM Assessment process, as part of the reporting regime identified above, will be carried out across the Estate every year from 2012 onwards. Ultimately, (possibly as early as 2014/15) it is also expected to receive instruction to take elements of this assessment into key supply chain organisations as well.

In response to the 2011/12 assessment, where the Estate failed to meet the MMMs for four of the six sections of the model, NDA developed an IRM Improvement Plan that was issued to all IGOs. This plan outlined all of the actions resulting from the most recent IAMM assessment, assigned owners (both NDA staff and those from across the Estate) and prioritised them in accordance with the inherent risk of not completing them by the next assessment. It is in using this plan that the NDA's SIRO has monitored progress throughout the year, via the governance fora, in an effort to improve the assessment score (achieving compliance) and meeting DECC's expectations in terms of effective information risk management in the next IAMM Assessment. This process will be repeated each reporting year.

Shared Policies and practices across the Estate: Key to this strategy and the IGCP's success will be the publication of a number of shared policies, publications and practices across the Estate. Foremost amongst these will be a single Records Management Policy (with an associated Records Retention Schedule; expected 2012/13) for every organisation in the Estate, together with the development and deployment of Information Asset Registers – identifying business critical information and systems. There will also be a common Knowledge Management Policy and, as identified above, a common Information Risk Reporting Policy, both expected in 2012/13.

Long term records management solution: Also known as the National Nuclear Archive (NNA), the NDA recognised very early on that the requirement to manage a number of our information assets is very often going to outlive the organisations that created them. Hence there is a need to establish a centre of excellence to manage all of the compliance requirements mandated on us for the long-term. It is envisaged that this new organisation will manage all of the archive records management requirements for the Estate together with centralising efforts with respect to some of the associated challenges such as; Digital Preservation, Access, Security, Digitisation strategies and very long-term Archive Management.

Longer term the NNA could provide all records management services required by the Estate together with the associated obligations such as compliance with the various Acts and Standards identified in Appendix 2 and the publication of Information Asset Registers.

It is currently envisaged that the NNA will be operational in 2016/17.

NNN: The National Nuclear Network will be critical to the success of the IGCP in that it will build on existing Estate-wide and HMG networks to create the ICT infrastructure necessary to share services and systems across the Estate. It is envisaged that, amongst other initiatives, the NNN will deliver as a minimum:

- an SMTP email gateway to enable communication between all NDA Estate organisations (and others as deemed appropriate) at an appropriate protective marking;
- connectivity to the GSI - Public Services Network (PSNet) and subsequent compliance with Cabinet Office instruction;
- connectivity that will support efficient business communication (telephone (VOIP) and video conferencing) between all member organisations at an appropriate protective marking;
- a home for many of the shared systems currently in use across the Estate such as BRIMS, Passport and the IRS reports database;
- a home for the planned new shared systems associated with the NNA, the NDA Knowledge Hub (see later), and any other planned Estate-wide shared service such as electronic document and records management (EDRM);
- cost savings as a result of the reduction in reliance on eRooms and similar services;
- improved security of sensitive nuclear and personal information resulting in the reduction of the number of breaches reported to regulators and HMG;
- opportunities to use Gcloud and similar service offerings potentially resulting in significant cost savings to all organisations in terms of the provision of ICT services and associated licensing overheads.

It is hoped that the NNN will be operational, albeit probably with basic or limited functionality, in 2013.

Interpretation and Deployment of HMG ICT Initiatives & Instruction: NDA will act as the conduit into DECC and through which HMG instruction and initiatives will disseminate. Inclusion in the CIO Council, Knowledge Council, Office of the Government SIRO and DECC family CIO group are examples.

Also, NDA should seek, on behalf of itself and for the benefit of the Estate, to seek to adopt common technologies with our sponsoring department, including relevant support mechanisms and contracts where instructed and/or where it is appropriate to do so.

KM programme: In terms of benefits realisation KM is the key to the success of the IGCP. Creation of a common Estate-wide policy (2012/13) together with the promotion of suitable services and the provision of effective systems and infrastructure will all enable the sharing and re-use of existing knowledge and the promotion of capturing new as yet unrecorded or difficult to capture knowledge, such as that that exists in the minds of the workforce. The problem becoming acute when one realises that without an effective KM programme critical and sometimes expensive to reproduce knowledge is leaving the Estate every day and currently little is being done about this. The IGCP will therefore ensure that a suitable KM programme is embedded in each organisation such that the risks associated with the loss of this type of knowledge are minimised. In addition, the NDA will create a knowledge hub in 2012/13 where common infrastructure for KM, that avoids the need for development of separate systems within different organisations (including regulators, DECC and other key stakeholders), will be available to all. There will also be links to the NDA R&D programme and the Skills and Capability strategy.

Training & education programme: There are a number of training requirements mandated on the NDA by the Cabinet Office MMMs and the Data Protection Act. Added to the requirement to better understand IG across the Estate it is clear that a comprehensive training programme is required in order to support many of the initiatives above and to meet the minimum level of understanding required in the workforce.

Governance Fora: The NDA's responsibility as the governing authority with respect to IG is clear and consequently a number of fora have been established to develop strategies, author Policies and Procedures and communicate key messages throughout the Estate. See section 6.1, Programme and Project Management Arrangements for details.

Audit and Review: A key element of any well-run programme and factored into the reporting regime via the NDA Audit Committee and NDA's Internal Audit Department.

3.4 Stakeholder Engagement Report

Can be seen at Appendix 5.

4 The Commercial Case

4.1 Contracting Options

It is expected that there will be external procurement instructions throughout the delivery of this strategy and the associated compliance programme. Wherever possible the procurement approach/strategy will be optimised to utilise the existing supply chain effectively, but only where it is not possible or practical to deliver the objectives from within the SLCs or subsidiaries themselves.

Most of the commercial arrangements (eg contract terms, contract length, payment mechanisms and incentives) will be specific to the project. However, they will always focus on benefits realisation whilst delivering value for money and only doing that work that is absolutely necessary to deliver the programme.

Delivery through others will continue to be a basic assumption, as will not reinventing the wheel and promoting collaborative procurement initiatives wherever possible/practical.

5 The Financial Case

5.1 Introduction

NDA will work with the Estate to develop compliance plans which are mindful of the affordability of the overall solution whilst also considering the risks associated with non-compliance and the regulatory requirements. Projects with early benefit realisation will be prioritised to support further developments from the savings accrued.

5.2 Overall affordability

Statutory and regulatory compliance is mandated and so must eventually be achieved. At present the NDA organisations are not delivering an effective work programme in this area and therefore costs are significantly higher than could be expected. Work to enforce a consistent strategy and to create an Estate-wide compliance programme of collaborative work will act to reduce the overhead cost in the long and medium term.

5.3 Budget Guidance and Governance

The work required by this topic has been submitted into the NDA budgeting process and complies with NDA financial requirements. Where NDA expenditure is expected this will be managed by either the SIRO or the Head of Information Governance from the sponsoring department's budget.

5.4 Financial Analysis

The current resource commitment and expenditure associated with IG across the Estate is difficult to estimate as much of the work is not transparent in Life Time Plans.

As described above the IGCP is still very immature and as such the required resources, accurate costs and potential benefits to be realised in terms of the implementation of this strategy are difficult to estimate. However, work has already begun and some projects have already performed this analysis:

Information Surveys (Gap Analyses): It is this workstream within the IGCP that will help NDA to better understand the full resource and financial implications of this strategy. Each organisation will perform their own survey, with NDA assistance, guidance and support including the provision of subject-matter expertise and consultancy. It is expected therefore that most of the costs associated with this workstream will be subsumed into the daily operations of each organisation. The provision of subject matter expertise and consultancy will cost in the region of £100k over the next two years and this will be managed in line with the sponsoring department's internal budget plan. The main benefit of this workstream will be the improved efficiency that will result once each gap analysis is completed and developed into an overarching compliance programme.

Effective IRM Reporting regime: It is expected for the main resource requirements for this workstream to be met by NDA. However, whilst there is no anticipated financial implications it is estimated to be in the region of 40-70 man days' worth of effort to meet the current reporting requirements and, whilst it is expected to reduce this somewhat as efficiencies are employed, this commitment will be year on year.

Compliance with the MMMs: It is expected that there will be some potentially significant costs associated with this workstream particularly once the IRM Improvement Plan is enacted. However, it is also anticipated that the majority of these costs will be subsumed into current ICT, KM, IM and Information Security/Assurance projects and therefore budgets. Where this is not the case the Information Governance Officer's Forum will consider the options, associated implications and recommend a solution to the NDA SIRO.

The IAMM process itself is a time consuming exercise and, for all organisations across the Estate, it is estimated that the total commitment to this will need to be in the region of 50-100 man days to complete each year, with at least 50% of this commitment coming from NDA.

Shared Policies and practices across the Estate: Each organisation will need to contribute time to this workstream in order to achieve the desired result. However, it is anticipated that this commitment is likely to be no more than 5 man days per organisation per year. NDA will provide assistance, guidance and support including the provision of subject-matter expertise and consultancy. It is expected therefore that most of the costs associated with this workstream will be subsumed into the daily operations of each organisation. The provision of subject matter expertise and consultancy will cost in the region of £50k over the next two years and this will be managed in line with the sponsoring department's internal budget plan.

Long term records management solution: This project is the most advanced of all workstreams within the IGCP having been active since 2006. Having been approved by the NDA Board in 2007 this project has been funded in accordance with the original business case. Additionally, funding for the design, build and operation of the facility (originally due to be open in 2012) has also been included in the sponsoring departmental budget since 2008.

At the time of writing the project is moving into phase 2, namely the production of the developed business case, the refinement of the operating model and the identification of commercial partners. It is anticipated that the remainder of the project will cost a maximum of £25m and that funding for this will be sought from a combination of NDA and private investment. Operating costs are difficult to estimate accurately at this stage but are anticipated to be between £1.5m and £3m per annum. It is expected that funding for the operation of the NNA will be through a combination of contracts with participating organisations and, if necessary, direct from NDA.

The financial benefits to the Estate will be extensive in terms of demolition of existing archive stores on and off sites and the cancellation or significant reduction on the reliance in external archive and storage solutions and records management contracts.

NNN: It is difficult at this stage of the IGCP to accurately estimate costs associated with this workstream. Particularly so now due to a number of recent developments with respect to the plan to re-use existing infrastructure that is no longer possible due to contractual changes and commitments within a number of the SLCs. What can be predicted is that this will need to be a very well-funded element of the programme in order to meet many of the goals identified earlier in this strategy. However, the opportunities for savings are also extensive primarily in terms of the provision of ICT and associated service costs across the Estate. Once the NNN is established the need for isolated networks and systems will be reduced and, where possible, collaboratively procured or delivered through a shared services agreement. Licensing costs are also expected to decrease significantly with the shared service approach facilitated by the NNN and will also introduce the ability to utilise the Public Services Network and Gcloud services, all resulting in eventual costs savings to the NDA.

KM programme: It is expected that there will be potentially significant costs associated with this workstream, particularly in the short term whilst infrastructure, services and working

practices are established. Even more so when one considers that KM is a relatively new discipline and not yet effectively embedded in any organisation's current working practices, including the NDA. 2012/13 milestones include the creation of the Estate-wide policy and the development of the Knowledge Hub, the latter of which is likely to cost in excess of £400k, primarily for hardware, software licenses and configuration costs. Subsequent year's expenditure will depend to a great extent on the success of the KH and the implementation of the policy. In short; the more successful the programme, the more services will be hosted, the more people will use it and, therefore, the more it will cost.

However, as has been identified earlier in the strategy, KM is the workstream that should demonstrate the most business efficiencies and therefore costs savings across the Estate.

Training & education programme: As identified earlier there is a requirement for an extensive training programme across all organisations in the Estate primarily relating to the effective protection of sensitive nuclear and personal information and the identification and understanding of individual's roles as assigned in accordance with the MMMs. Wherever possible these needs will be met using the Civil Service Learning (CSL) programme. However, it is anticipated that a budget will be required to deliver non CSL mandated training (Data Protection training for example) and that this should initially be managed centrally by the NDA whilst effective training programmes are established within each organisation.

The financial benefits of an effective training programme however are clear. A suitably trained workforce will operate more effectively in terms of IRM, the net result being the reduction in the number of incidents and breaches and an increase in the efficiency associated with managing day-to-day information (creation, storage, searching, archiving and destruction).

Governance Fora: The costs associated with this element of the programme are minimal and will be met through the sponsoring department's internal budget.

Audit and Review: The costs associated with this element of the programme are expected to be minimal and will be met through the sponsoring department's internal budget.

6 The Management Case

6.1 Programme and Project Management Arrangements

To ensure that the IG Strategy represents best practice as defined by the NDA Estate subject matter experts and that it aligns with both the NDA and SLC/subsidiary business needs we must:

- Secure alignment across the Estate. SLCs and subsidiaries will ensure that programmes and initiatives are aligned to this strategy and relate to the NDA strategic priorities and high level objectives;
- Standardise the governance processes. Where possible these should be based upon industry standards and include performance metrics and maturity models for benchmarking comparisons. These should include but not be limited to:
 - One set of policies and standards;
 - Common service definition and scope for information services.

Representatives from each SLC and subsidiary have therefore been appointed for each of the key information governance roles:

- **Information Governance Officer (IGO)** – a Board or Executive (with Board support) level appointee responsible for all IG matters within their organisation and the individual responsible for all reporting obligations to the NDA SIRO;
- **Knowledge Manager &/or Information Manager** – the individual(s) responsible for all KM, IP & IM matters at the respective organisation, where possible reporting directly to the IGO;
- **Information Assurance (Security) Manager** – the individual responsible for all IA matters at the respective organisation, where possible reporting directly to the IGO.

A number of governance fora have then been established to oversee the development and implementation of this strategy and, ultimately, the delivery of the IGCP. Terms of Reference for all of these for a have been agreed. The IGOF ToRs can be seen at Appendix 6.

Information Governance Officer's Forum (IGOF)

Comprising the NDA SIRO and IGOs from across the Estate this group will own the IG Strategy and the IGCP going forward. It will commission further development of the strategy and programme and ensure that objectives and milestones are embedded into their own strategies and policies going forward. The Knowledge and Information Management Governance forum and the Nuclear Information Assurance forum both report into the IGOF.

Knowledge and Information Management Governance Forum (KIMGF)

Comprising the NDA Departmental Records Officer (DRO) and Knowledge and Information Managers from across the Estate this group will input into various strands of the strategy, develop, implement and maintain the IM and KM programmes, help create communities of practice and develop the KM hub which will support the various initiatives. It will also identify any collaborative Information & Knowledge Management projects which should be progressed.

Nuclear Information Assurance Forum (NIAF)

A peer group comprising the NDA's Departmental Security Officer (DSO) and Information Assurance professionals from the Estate whose purpose is to share good practice and

procedures, increase value through collaborative procurement and maintain the appropriate professional competencies & standards.

NDA Management Team

In accordance with HM Government's Security Policy Framework (SPF v8.0 April 2012) and Cabinet Office's MMMs NDA have appointed a SIRO and the other mandated roles; DSO, Information Technology Security Officer (ITSO), Communications Security Officer (ComSO), DRO and Information Asset Owners (IAOs) as seen in Appendix 7.

Responsibilities of the SIRO include, but are not limited to:

- Lead and foster a culture that values and uses information for the public good;
- Ensure that the NDA has a programme in place to achieve and monitor that culture across the Estate;
- Appoint IAOs internally and IGOs across the Estate;
- Own the information risk management policy and risk assessment and reporting processes;
- Ensure that appropriate reporting and assessments are completed, Estate-wide;
- Provide written advice to the Audit Committee and Executive Team relating to IRM;
- Ensure that appropriate and ongoing IRM training programmes are in place across the Estate;
- Appraise the Board on a regular basis with particular regard to defining and reassessing risk appetite based on HMG and regulatory expectations;
- Advise the Accounting Officer on the mandated IRM elements of his Governance Statement in the Annual Report and Accounts.

6.2 Work Programme

The IGCP primarily focuses on the compliance issues associated with data, information and knowledge creation, use, storage, assurance, management, re-use, security, sharing, archiving and destruction. The programme was approved in principle by the NDA Executive team in December 2010 and, on successful approval of this strategy, work will then focus on the development of the detailed 'National Programme'.

6.3 Management of Risks and Opportunities

Each organisation will manage any arising programme risks and opportunities according to their own processes and report into the NDA risk and opportunity process in the normal manner. Within NDA these will be owned by the SIRO.

6.4 Assurance Arrangements

The governance fora, chaired by NDA, will also be used as the primary assurance body for each project, work stream and collaborative procurement associated with the programme. The ultimate authority for the programme lies with the NDA's SIRO.

6.5 Stakeholder & Regulator Engagement

A stakeholder and regulator engagement plan will be developed as the programme matures. Stakeholders and regulators will also be invited to the relevant governance fora at appropriate times, specifically at key milestones or developments within the programme as identified in Appendix 5. Historically engagement with these groups has been ad-hoc as the NDA has matured its thinking with respect to IG. Going forward this relationship will be formalised in the plan mentioned above.

6.6 Arrangements for Change Management

As with the assurance arrangements the change control process and associated management for the programme will be managed by the governance fora under the authority of the NDA SIRO.

6.7 Arrangements for Benefits Realisation and Post Investment Appraisal

Benefits realisation will be an ongoing consideration throughout the programme. Again, this will be managed by the governance fora under the authority of the NDA SIRO.

Post investment appraisal of the programme will be primarily managed by the NDA's DRO and DSO. With respect to the programme this will be determined by regular audit and inspection by both NDA's governance teams and the relevant regulator(s). Results from these audits, where applicable, will be assessed at the governance fora under the authority of the NDA SIRO.